

Application No. 10/605,485
Docket No. A3-1657
Amendment dated July 19, 2004
Reply to Office Action of April 19, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A wheelchair braking device for a wheelchair having a seat and a wheel, the wheelchair braking device comprising:

a support structure;

a sensing lever pivotably mounted to the support structure for rotational movement in oppositely-disposed first and second rotational directions, the sensing lever comprising means for engaging the seat of the wheelchair, the engaging means being adapted to rotate upward into engagement with the seat when the support structure is mounted to the wheelchair and the sensing lever is pivoted in the first rotational direction;

braking means slidably mounted to the support structure for movement in oppositely-disposed first and second linear directions;

means for biasing the braking means in the first linear direction;

means for interconnecting the sensing lever and the braking means, the interconnecting means comprising a link pivotably connected at a first end thereof to the

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sensing lever and pivotably connected at a second end thereof to the braking means, the interconnecting means causing the biasing means to bias the sensing lever in the first rotational direction, the interconnecting means causing the braking means to move in the second linear direction when the sensing lever is caused to rotate in the second rotational direction.

Claim 2 (original): The wheelchair braking device according to claim 1, wherein the support structure comprises a bar having a longitudinal length terminating with oppositely-disposed first and second ends, each of the first and second ends having means for attaching the bar to a wheelchair.

Claim 3 (original): The wheelchair braking device according to claim 2, wherein the sensing lever is pivotably mounted to the bar so as to rotate about an axis transverse to the longitudinal length of the bar.

Claim 4 (original): The wheelchair braking device according to claim 1, wherein the sensing lever is pivotably mounted to the support structure so as to rotate about an axis transverse to the support structure.

Claim 5 (currently amended): The wheelchair braking device according to

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claim 1, wherein ~~the sensing lever comprises means for engaging a wheelchair seat,~~
the engaging means moves in a downward direction ~~moving in upward and downward~~
~~directions~~ when the sensing lever moves in the ~~first and~~ second rotational direction,
directions thereof, respectively.

Claim 6 (currently amended): The wheelchair braking device according to
claim 1, further comprising means for mounting the support structure to the wheelchair,
wherein the interconnecting means is ~~a link pivotably connected at a first end thereof to~~
~~the sensing lever and pivotably connected at a second end thereof to the braking means~~
~~for interconnecting the sensing lever and the braking means, the interconnecting means~~
~~causing the biasing means to bias the sensing lever in the first rotational direction.~~

Claim 7 (original): The wheelchair braking device according to claim 1,
wherein the biasing means comprises a spring having a first end attached to the braking
means and a second end attached to the support structure.

Claim 8 (currently amended): A wheelchair braking device comprising:
a support structure;
a sensing lever pivotably mounted to the support structure for rotational
movement in oppositely-disposed first and second rotational directions, the sensing lever

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comprising means for engaging a wheelchair seat, the engaging means moving in upward and downward directions when the sensing lever moves in the first and second rotational directions thereof, respectively;

braking means slidably mounted to the support structure for movement in oppositely-disposed first and second linear direction. ~~The wheelchair braking device according to claim 1,~~ wherein the braking means comprises a block slidably coupled to the support structure and a cantilevered member mounted to and extending from the block in a transverse direction to the first and second linear directions;

means for biasing the braking means in the first linear direction; and
means for interconnecting the sensing lever and the braking means, the interconnecting means causing the biasing means to bias the sensing lever in the first rotational direction, the interconnecting means causing the braking means to move in the second linear direction when the sensing lever is caused to rotate in the second rotational direction.

Claim 9 (original): The wheelchair braking device according to claim 1, wherein the braking device is mounted to a wheelchair with multiple wheels, the support structure being located along one of the wheels of the wheelchair and oriented in a fore-aft direction relative to the wheelchair.

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Claim 10 (original): A wheelchair having a seat, multiple wheels, and at least two braking devices, each of the braking devices comprising:

a sensing lever pivotably mounted to the wheelchair so that a first end of the sensing lever is movable in upward and downward directions while contacting the seat of the wheelchair;

braking means slidably mounted relative to the wheelchair for engaging one of the wheels of the wheelchair;

means for biasing the braking means into engagement with the one wheel of the wheelchair;

means for interconnecting the sensing lever and the braking means, the interconnecting means causing the biasing means to bias the first end of the sensing lever in the upward direction, the interconnecting means causing the braking means to move out of engagement with the one wheel when the first end of the sensing lever is caused to move in the downward direction.

Claim 11 (original): The wheelchair according to claim 10, wherein the sensing lever is pivotably mounted relative to the wheelchair so as to rotate about a horizontal axis.

Claim 12 (original): The wheelchair according to claim 10, further

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comprising a support structure having oppositely-disposed first and second ends, each of the first and second ends being coupled to the wheelchair, wherein the sensing lever is pivotably mounted to the support structure so as to rotate about a horizontal axis.

Claim 13 (original): The wheelchair according to claim 12, wherein the biasing means comprises a spring having a first end attached to the braking means and a second end attached to the support structure.

Claim 14 (original): The wheelchair according to claim 12, wherein the braking means comprises a block slidably coupled to the support structure and a cantilevered member mounted to and extending from the block for engagement with the one wheel of the wheelchair.

Claim 15 (original): The wheelchair according to claim 14, wherein the support structure comprises a bar located along the one wheel of the wheelchair and oriented in a fore-aft direction of the wheelchair.

Claim 16 (original): The wheelchair according to claim 10, wherein the braking means is slidably mounted relative to the wheelchair for movement in fore and aft directions of the wheelchair.

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Claim 17 (original): The wheelchair according to claim 16, wherein the biasing means causes the braking means to move in the aft direction to engage the one wheel of the wheelchair.

Claim 18 (original): The wheelchair according to claim 16, wherein the sensing lever and the interconnecting means are operable to cause the braking means to move in the fore direction to disengage the one wheel of the wheelchair when the first end of the sensing lever moves in the downward direction thereof.

Claim 19 (original): The wheelchair according to claim 10, wherein the sensing lever comprises means for engaging the seat of the wheelchair, the engaging means moving in the upward and downward directions with the first end of the sensing lever.

Claim 20 (original): The wheelchair according to claim 10, wherein the interconnecting means is a link pivotably connected at a first end thereof to the sensing lever and pivotably connected at a second end thereof to the braking means.